

Framework for Developing Suspended and Bedded Sediment (SABS) Water Quality Criteria

Robert Spehar¹, Susan Cormier², John Paul³, Walter Berry⁴, Phil Kaufmann⁵, Doug Norton⁶, Robert Cantilli⁷, Rick Stevens⁷, William Swietlik⁷

¹U.S. EPA/Office of Research and Development (ORD)/National Health and Environmental Effects Research Laboratory (NHEERL)/Mid-Continent Ecology Division (MED)

²U.S. EPA/ORD/National Risk Management Research Laboratory (NRMRL)/LPRCD

³U.S. EPA/ORD/NHEERL/Research Triangle Park, NC

⁴U.S. EPA/ORD/NHEERL/Atlantic Ecology Division (AED)

⁵U.S. EPA/ORD/NHEERL/Western Ecology Division (WED)

⁶U.S. EPA/Office of Water (OW)/Office of Wetlands, Oceans, and Watersheds (OWOW)/(AWPD)

⁷U.S. EPA/OW/Office of Science and Technology (OST)/Health and Ecological Criteria Division (HECD)

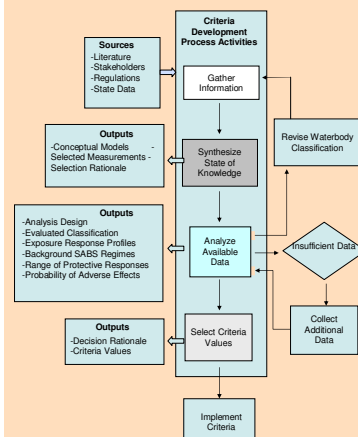
Suspended and Bedded Sediments (SABS)

- SABS are organic and inorganic particles that are suspended in, are carried by or accumulate in waterbodies. SABS occur naturally in waterbodies.

Problem:

- Imbalanced loadings of SABS to aquatic systems have been one of the major causes of water quality impairments in the Nation according to Water Quality Reports.
- Imbalanced amounts of SABS can have economic impacts (e.g., reduced drinking and storage water supplies, increased water filtration and dredging costs, adverse ecological effects, etc.).

Activities of SABS Criteria Development Process



Purpose of the Framework:

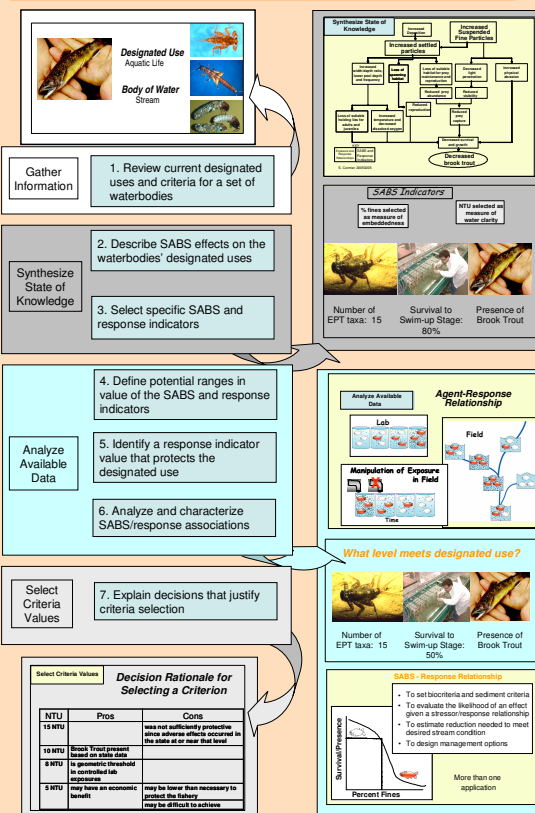
- States, tribes and territories need technical information to develop SABS criteria.
- The Framework describes a process and the methods for assembling, evaluating and analyzing multiple types of environmental information to develop scientifically defensible SABS criteria.

Process and Methods of the SABS Framework:

- Lists activities and steps for gathering information, synthesizing the state of knowledge, analyzing available data, gathering more data if needed and selecting criteria values.
- Describes methods for measuring, classifying and associating various levels of SABS with designated use.

SABS Framework

Steps of SABS Criteria Development Process (illustrated with a hypothetical case)



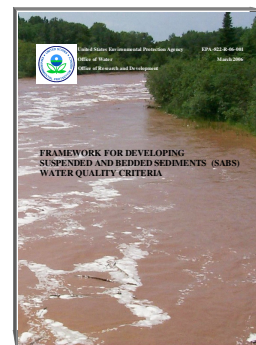
Collaboration and Interaction:

- A workgroup of scientists from OW, ORD and Region 8 developed the Framework
- OW and ORD plan to conduct workshops to make it easy for states, tribes and territories to use the process and methods described within the Framework.
- The Framework may be updated based on feedback from users.

How States, Tribes and Territories Can Use the Framework:

- As a source of scientifically valid tools and technical methods needed for:
 - Developing criteria
 - Adopting criteria into standards
 - Managing and evaluating performance of management actions to support attainment of SABS standards.

SABS Framework Document:



Contact Information:

For more information about EPA's Framework for developing SABS Water Quality Criteria (EPA-822-R-06-001) contact:

Bob Cantilli
U.S. EPA
OW/HECD
Washington, DC 20460
Telephone: 202-566-1091
cantilli.robert@epa.gov

Bob Spehar
U.S. EPA
NHEERL/MED
Duluth, Minnesota
Telephone: 218-529-5123
spehar.robert@epa.gov

Technical Methods

Measurement of SABS

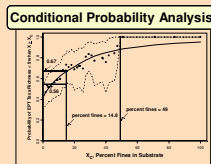
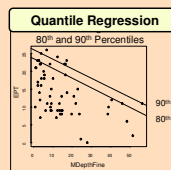
Readily Available Measures
Sediment Transport Curves
Relative Bed Stability

Waterbody Classification

Empirical Classification of Reference Sites
Fluvial Geomorphology

Associating SABS with Response Indicators

Controlled Experiment
Field Observational Studies
Percentile Analysis (including Reference Condition Methods)
Exposures and Effects Analysis
Conditional Probability Analysis
Waterbody Use Functionality



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